In the Claims:

Please amend the claims as indicated below. This listing of claims replaces all prior versions.

1. (original) A method for analyzing an integrated circuit die having a back side opposite circuitry at a circuit side and having a liquid crystal layer formed over a portion of the die, the method comprising:

directing near infrared (nIR) laser light at circuitry in the die via the liquid crystal layer and generating heat at the circuitry; and

detecting a defect in the die by detecting a portion of the liquid crystal changing phase.

2. (currently amended) [[The]]A method ~~of claim 1, further~~for analyzing an integrated circuit die having a back side opposite circuitry at a circuit side and having a liquid crystal layer formed over a portion of the die, the method comprising:

operating a circuit portion in the die near a failure condition~~, wherein~~;

directing near infrared (nIR) laser light at circuitry in the die via the liquid crystal layer and generating heat at the circuitry including~~includes~~ adding enough heat to the circuit portion to cause the liquid crystal over the circuit portion to change phase; and

detecting a defect in the die by detecting a portion of the liquid crystal changing phase.

3. (original) The method of claim 2, wherein operating the circuit portion includes generating enough heat at the circuit portion to cause the liquid crystal over the circuit portion to approach a threshold temperature at which the liquid crystal changes phase and wherein adding enough heat to the circuit portion with the nIR laser light includes causing the liquid crystal to reach the threshold temperature and change phase.

4. (original) The method of claim 2, wherein operating the circuit portion includes operating the die in a continuous loop at a near failure condition.

5. (original) The method of claim 1, wherein generating heat at the circuitry with the nIR laser light includes causing the circuitry to absorb laser radiation.

6. (original) The method of claim 5, wherein causing the circuitry to absorb laser radiation includes causing the circuitry to absorb at least one of: free carriers and phonons.

7. (original) The method of claim 1, further comprising using the nIR laser light to image the die and using the image to identify the portion of circuitry that causes the liquid crystal to change phase.

8. (original) The method of claim 1, further comprising using the nIR laser light to image the die and using the image to identify a circuit portion for analysis, wherein directing the nIR laser light at circuitry includes directing the laser light to the identified circuit portion.

9. (original) The method of claim 1, wherein generating heat at the circuitry includes using silicon in the die to convert light energy from the laser into heat energy.

10. (original) The method of claim 1, wherein directing nIR light at the circuitry includes using a near infrared (nIR) scanning optical microscope (SOM) to scan the die with a laser beam.

11. (original) The method of claim 1, wherein the integrated circuit die includes a flip chip die having a thinned region in the back side and having the liquid crystal layer formed over the thinned region, wherein directing the nIR laser at circuitry in the die includes directing the nIR laser at circuitry via the thinned back side.

12. (original) The method of claim 1, wherein directing nIR laser light includes directing laser light having a wavelength of about 1.3 microns.

13. (original) The method of claim 1, wherein directing nIR laser light includes raster scanning the nIR laser light across the die.

14. (original) The method of claim 1, wherein detecting a portion of the liquid crystal changing phase includes using the nIR laser light to image the liquid crystal and using the image to detect the portion of the liquid crystal changing phase.

15. (currently amended) [[The]]A method ~~of claim 14, wherein~~for analyzing an integrated circuit die having a back side opposite circuitry at a circuit side and having a liquid crystal layer formed over a portion of the die, the method comprising:

directing near infrared (nIR) laser light at circuitry in the die via the liquid crystal layer and generating heat at the circuitry; and

detecting a defect in the die by detecting a portion of the liquid crystal changing phase including using the nIR laser light to image the liquid crystal, using the image to detect the portion of the liquid crystal changing phase, and ~~includes~~ evaluating a plurality of images of the liquid crystal.

16. (original) [[The]]A method ~~of claim 14, wherein~~for analyzing an integrated circuit die having a back side opposite circuitry at a circuit side and having a liquid crystal layer formed over a portion of the die, the method comprising:

directing near infrared (nIR) laser light at circuitry in the die via the liquid crystal layer and generating heat at the circuitry; and

detecting a defect in the die by detecting a portion of the liquid crystal changing phase including using the nIR laser light to image the liquid crystal, using the image to detect the portion of the liquid crystal changing phase, and~~includes~~ overlaying the image of the liquid crystal onto an image of the die circuitry and matching the portion of the liquid crystal changing phase to a defective circuit portion in the die.

17. (previously presented) The method of claim 1, further comprising removing sufficient amount of substrate from the die for heat transfer from the circuitry to the

liquid crystal in a manner that causes a portion of the liquid crystal to reach a temperature near its threshold temperature for changing phase, wherein the liquid crystal is formed over the die after the substrate removal.

18. (original) The method of claim 1, wherein directing nIR laser light includes varying the operation of an nIR laser.

19. (original) The method of claim 18, wherein varying the operation of the nIR laser includes pulsing the laser.

20. (original) A system for analyzing an integrated circuit die having a back side opposite circuitry at a circuit side and having a liquid crystal layer formed over a portion of the die, the system comprising:

means for directing nIR laser light at circuitry in the die via the liquid crystal layer and generating heat at the circuitry; and

means for detecting a defect in the die by detecting a portion of the liquid crystal changing phase.

21. (original) A system for analyzing an integrated circuit die having a back side opposite circuitry at a circuit side and having a liquid crystal layer formed over a portion of the die, the system comprising:

a laser source adapted to direct near infrared (nIR) laser light at circuitry in the die via the liquid crystal layer and generate heat at the circuitry; and

a detection arrangement adapted to detect a defect in the die by detecting a portion of the liquid crystal changing phase.

22. (original) The system of claim 21, wherein the laser source includes a near infrared scanning optical microscope (nIR SOM).

23. (original) The system of claim 22, wherein the detection arrangement includes the nIR SOM and is adapted to detect an image of a portion of the liquid crystal having changed phase.

24. (original) The system of claim 23, wherein the nIR SOM is adapted to detect images of the liquid crystal over time and to generate an image of a portion of the liquid crystal having undergone a phase change as an average of the liquid crystal images.